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Claims

[c1] 1. A multilayer film structure for absorbing electromagnetic wave, comprising:
a plurality of polymer films having a multi-film stacking structure, wherein the polymer films are composed of a carbon group compound structure; and
a plurality of permeability films formed on each surface of the polymer films.

[c2] 2. The multilayer film structure of claim 1, wherein the permeability films comprise a metal film.

[c3] 3. The multilayer film structure of claim 2, wherein a thickness of the metal film is in a range of 10 μm to 100 μm.

[c4] 4. The multilayer film structure of claim 2, wherein the metal film comprises an alloy film.

[c5] 5. The multilayer film structure of claim 2, wherein the metal film is a stacking layer composed of at least one layer in the group consisted of aluminum layer, nickel layer, iron layer, copper layer and cobalt layer.

[c6] 6. The multilayer film structure of claim 1, wherein the

carbon group compound structure comprises a carbon containing particle.

[c7] 7. The multilayer film structure of claim 6, wherein the carbon containing particle comprises a nanoparticle.

[c8] 8. The multilayer film structure of claim 6, wherein the carbon containing particle comprisesa silicon carbide particle.

[c9] 9. The multilayer film structure of claim 1, wherein the permeability films comprise a filmhaving giant magnetoresistance (GMR).

[c10] 10. The multilayer film structure of claim 1, wherein the polymer filmscomprise a film havinga far infrared ceramic.

[c11] 11. A manufacturing method of a multilayer film structure for absorbing electromagnetic wave, comprising:
providing a polymer solution;
adding a carbon group compound structure into the polymer solution;
forming a plurality of polymer filmsby using the polymer solution;
forming a plurality of permeability films on each surface of the polymer films; and
stacking the polymer films.

[c12] 12. The manufacturing method of claim 11, wherein the step of adding the carbon group compound structure into the polymer solution further comprises a step of adding a far infrared ceramic into the polymer solution.

[c13] 13. The manufacturing method of claim 11, wherein the step of forming a plurality of permeability films on each surface of the polymer films comprises a step offorming an alloy layer on each surface of the polymer films.

[c14] 14. The manufacturing method of claim 11, wherein the step of forming a plurality of permeability films on each surface of the polymer films comprises a step of usinga vacuum sputtering method or an electroplating method.

[c15] 15. The manufacturing method of claim 11, wherein the step of forming a plurality of permeability films on each surface of the polymer films comprises a step of proceeding a depositing process on each surface of the polymer films for several times in order to form a multilayer metal film.

[c16] 16. The manufacturing method of claim 15, wherein the depositing process comprises a vacuum sputtering method or an electroplating method.

[c17] 17. An anti-electromagnetic wave device, for absorbing

an electromagnetic wave emitted from a main body having a cover, the device comprising:
a plurality of polymer films having a multi-film stacking structure, wherein the polymer films are composed of a carbon group compound structure and attached to an inner side of a cover; and
a plurality of permeability films formed on each surface of the polymer films.

[c18] 18. The anti-electromagnetic wave device of claim 17, wherein the permeability filmscomprise a metal film.

[c19] 19. The anti-electromagnetic wave device of claim 18, wherein the metal film comprises an alloy film.

[c20] 20. The anti-electromagnetic wave device of claim 18, wherein the metal film is a stacking layer composed of at least one layer in the group consisted of aluminum layer, nickel layer, iron layer, copper layer and cobalt layer.

[c21] 21. The anti-electromagnetic wave device of claim 17, wherein the carbon group compound structure comprises a carbon containing particle.

[c22] 22. The anti-electromagnetic wave device of claim 21, wherein the carbon containing particle comprises a nanoparticle.

[c23] 23. The anti-electromagnetic wave device of claim 21, wherein the carbon containing particle comprisesa silicon carbide particle.

[c24] 24. The anti-electromagnetic wave device of claim 17, wherein the permeability films comprise a filmhaving giant magnetoresistance (GMR).

[c25] 25. The anti-electromagnetic wave device of claim 17, wherein the polymer filmscomprise a film havinga far infrared ceramic.

[c26] 26. Amanufacturing method of an anti-electromagnetic wave device, comprising:
(a) providing a main body having a cover;
(b) forming a polymer film on an inner side of the cover, wherein the polymer film comprising a carbon group compound structure;
(c) forming a permeability film on a surface of the polymer film; and
(d) repeating the steps (b) and (c).

[c27] 27. The manufacturing method of claim 26, wherein the polymer film further comprises a far infrared ceramic.

[c28] 28. The manufacturing method of claim 26, wherein the step of forming a permeability film on the surface of the polymer film comprises a step of forming an alloy film

on the surface of the polymer film.

[c29] 29. The manufacturing method of claim 26, wherein the step of forming a permeability film on the surface of the polymer film comprises a step ofproceeding a depositing process on the surface of the polymer film for several times in order to form a multilayer metal film.